

**Amendments to the Specification:**

Please replace paragraph [0005] with the following amended paragraph:

5 This is the age of radio communications. Around the world, cell phones are now one of  
the most common pieces of equipment to be found among the general public. Wireless  
local area network LAN (WLAN) is an acknowledged trend for business and consumer  
networking environments. The mobility enabled by wireless connections has dramatically  
changed and improved the lives of ordinary people. However, there is no universal  
standard for wireless modulation formats. For example, there are digital enhanced  
10 cordless telecommunications (DECT), global system for mobile communications-900  
(GSM-900), GSM-1800, wideband code division multiple access (WCDMA), and code  
division multiple access 2000 (CDMA2000) systems for mobile telephony. Another  
situation is that there may be multiple modes within a standard. For example, there are  
orthogonal frequency division multiplexing (OFDM) modes and direct sequence  
15 spread-spectrum/complementary code keying (DSSS/CCK) modes within the Institute of  
Electrical & Electronics Engineers (IEEE) 802.11g standard. For mobile telephony  
systems base stations supporting multiple formats, signals of different standards need to  
be dealt with simultaneously. On the other hand, on the mobile station end, only one  
signal standard needs to be supported at the same time. For example, a base station that  
20 supports both GSM-1800 and WCDMA standards needs to deal simultaneously with  
signals modulated according to these formats. But a cell phone needs to receive or  
transmit signals of only one standard at one time.

Please replace paragraph [0006] with the following amended paragraph:

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The IEEE 802.11 WLAN standard provides a number of physical layer options in terms  
of data rates, modulation types and spreading spectrum technologies. Please refer to Fig.1.  
Fig.1 illustrates provided data rates, sample rates, carrier frequencies and modulation

types for various modes of IEEE WLAN standard. An extension of the IEEE 802.11 standard, namely IEEE 802.11a, defines requirements for a physical layer operating in the 5 GHz frequency and data rates ranging from 6Mps to 54Mps. IEEE 802.11a defines a physical layer based on the orthogonal frequency division multiplexing (OFDM) modulation scheme. A second extension, IEEE 802.11b, defines a set of physical layers' specifications operating in the 2.4GHz industrial, scientific, and medical (ISM) frequency band up to 11 Mps. The direct sequence spread spectrum/complementary code keying (DSSS/CCK) physical layer is one of the three physical layers supported in the IEEE 802.11 standard and uses the 2.4GHz frequency band as the RF transmission media.